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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PAUL AUGUSTINUS PETER KAUFHOLZ

Appeal 2008-1378
Application 09/928,553¹
Technology Center 2600

Decided: July 31, 2008

Before ROBERT E. NAPPI, SCOTT R. BOALICK, and
KEVIN F. TURNER, *Administrative Patent Judges*.

BOALICK, *Administrative Patent Judge*.

¹ Application filed August 13, 2001. The real party in interest is Koninklijke Philips N.V.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1-17, all the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

STATEMENT OF THE CASE

Appellant's invention relates to "a method for operating a multi-device system, wherein echo canceling has been designed on the level of the various devices, but is operative on the level of the comprehensive system." (Spec. 1:20-22.)

Claim 1 is exemplary:

1. A method for operating a user-interactive, multi-device, audio-video system that contains user speech recognizing facilities and echo canceling facilities for avoiding the recognizing of speech output from the system as user speech, the method comprising:

in the presence of a plurality of devices, each including a functionally separate speech recognizing facility, and echo canceling facility, driving each echo canceling facility to combine each facility's functional ability for canceling one or more mutually unique cancelable speech entities, and combining such cancelled entities for overall non-recognition by the system.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Knittle

U.S. 5,761,638

Jun. 2, 1998

Finn	U.S. 6,505,057 B1	Jan. 7, 2003 (filed Jan. 23, 1998)
Stammler	U.S. 6,839,670 B1	Jan. 4, 2005 (filed Sep. 9, 1996)

Claims 1, 5-8, and 12-17 stand rejected under 35 U.S.C. § 103(a) as being obvious over Finn and Stammler.

Claims 2-4 and 9-11 stand rejected under 35 U.S.C. § 103(a) as being obvious over Finn, Stammler, and Knittle.

Rather than repeat the arguments of Appellant or the Examiner, we make reference to the Brief and the Answer for their respective details. Only those arguments actually made by Appellant have been considered in this decision. Arguments that Appellant did not make in the Brief have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).²

ISSUE

The issue is whether Appellant has shown that the Examiner erred in rejecting the claims under 35 U.S.C. § 103(a). The issue turns on whether Finn and Stammler teach or suggest "driving each echo canceling facility to combine each facility's functional ability for canceling one or more mutually

² Except as will be noted in this opinion, Appellant has not presented any substantive arguments directed separately to the patentability of the dependent claims or related claims in each group. In the absence of a separate argument with respect to those claims, they stand or fall with the representative independent claim. *See* 37 C.F.R. § 41.37(c)(1)(vii).

unique cancelable speech entities, and combining such cancelled entities for overall non-recognition by the system."

PRINCIPLES OF LAW

All timely filed evidence and properly presented arguments are considered by the Board in resolving an obviousness issue on appeal. *See In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984).

In the examination of a patent application, the Examiner bears the initial burden of showing a *prima facie* case of unpatentability. *Id.* at 1472. When that burden is met, the burden then shifts to the Applicant to rebut. *Id.*; *see also In re Harris*, 409 F.3d 1339, 1343-44 (Fed. Cir. 2005) (finding rebuttal evidence unpersuasive). If the Applicant produces rebuttal evidence of adequate weight, the *prima facie* case of unpatentability is dissipated. *In re Piasecki*, 745 F.2d at 1472. Thereafter, patentability is determined in view of the entire record. *Id.* However, on appeal to the Board it is the Appellant's burden to establish that the Examiner did not sustain the necessary burden and to show that the Examiner erred. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) ("On appeal to the Board, an applicant can overcome a rejection [for obviousness] by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.") (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)).

"Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said

subject matter pertains.'" *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734 (2007). In *KSR*, the Supreme Court reaffirmed that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.* at 1739. The Court explained:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 1740. The Court also explained that:

[o]ften, it will be necessary . . . to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.

Id. at 1740-41.

"[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d at 988. "To facilitate review, this analysis should be made explicit." *KSR*, 127 S. Ct. at 1741. However, "the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences

and creative steps that a person of ordinary skill in the art would employ." *Id.*

The Supreme Court noted that "[u]nder the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." *Id.* at 1742 The Court also noted that "[c]ommon sense teaches . . . that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle." *Id.* "A person of ordinary skill is also a person of ordinary creativity, not an automaton." *Id.*

During examination of a patent application, a claim is given its broadest reasonable construction consistent with the specification. *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969). "[T]he words of a claim 'are generally given their ordinary and customary meaning.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (internal citations omitted). The "ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Id.* at 1313.

ANALYSIS

Appellant contends that the Examiner erred in rejecting claims 1-17 as being obvious. Reviewing the record before us, we do not agree. In particular, we find that the Appellant has not shown that the Examiner failed

to make a prima facie showing of obviousness with respect to claims 1-17. Appellant fails to meet the burden of overcoming that prima facie showing.

Regarding claim 1, Appellant argues that Finn does not teach or suggest "driving each echo canceling facility to combine each facility's functional ability for canceling one or more mutually unique cancelable speech entities, and combining such cancelled entities for overall non-recognition by the system," as claimed. (Br. 5-7.) We do not agree.

Appellant's argument amounts to an attack on the references individually. But it is well settled that "[o]ne cannot show non-obviousness by attacking references individually where . . . the rejections are based on combinations of references." *In re Keller*, 642 F.2d 413, 426 (CCPA 1981). The test of obviousness is what the "combined teachings would have suggested to those of ordinary skill in the art." *Id.*

As the Examiner correctly found, under a broad but reasonable interpretation of the claim consistent with the Specification, the combined teachings of Finn and Stammler meet the limitation of "driving each echo canceling facility to combine each facility's functional ability for canceling one or more mutually unique cancelable speech entities, and combining such cancelled entities for overall non-recognition by the system." (Ans. 4-9; Final Office Action 5-6.) In particular, Finn teaches a method and system where multiple devices (microphones 20, 22, 38, 40) each include an individual automatic echo canceling (AEC) facility that uses an echo cancellation summer (162A, 162B, 172A, 172B) to produce an echo cancelled signal (170A, 170B, 170C, 170D) by subtracting echo cancellation signals produced by adaptive acoustic echo cancellers (AEC_{11,11}, AEC_{12,11}, AEC_{12,12}, AEC_{11,12}, AEC_{21,21}, AEC_{22,21}, AEC_{22,22}, AEC_{21,22} -- which use

signals from loudspeakers 24, 26, 42, and 44 as input) from the signals produced by the microphones (20, 22, 38, 40). (Ans. 4-6; Final Office Action 5-6; Finn Fig. 9A, col. 15, l. 61 to col. 18, l. 6.) Finn also teaches that the system may further include a noise reduction filter (182A, 182B, 182C, 182D) to remove background noise from the echo cancelled signal of each microphone. (Finn Fig. 9B; col. 19, ll. 16-39.) The echo cancelled signals of the microphones are combined (by a telephone steering switch 80A) to create an overall echo-cancelled input that is forwarded to a cellular telephone (58). (Ans. 4-6; Final Office Action 5-6; Finn Figs. 9A & 9B, col. 18, ll. 7-16, col. 20, ll. 12-25.)

As the Examiner also correctly found, Finn discloses the desirability of implementing its echo canceling method and system in a vehicle speech recognition system but does not explicitly disclose a speech recognizing facility used with the echo cancellation facility. (Ans. 5, 7, 9; Final Office Action 5; Finn col. 3, ll. 17-23.) We further agree with the Examiner that Stammmler discloses the use of a speech recognition facility with an echo cancellation facility. (Ans. 5, 7, 9; Final Office Action 5; Stammmler col. 1, l. 56 to col. 4, l. 39, col. 6, ll. 40-47, col. 7, ll. 25-48, col. 8, ll. 18-19, col. 9, ll. 34-37, Figs. 1, 2.) An embodiment of Stammmler teaches that a speech dialog system in a motor vehicle may be used for multiple functions, such as operating various devices (phone, radio, navigation system, heating system, etc.). (Stammmler col. 19, l. 22 to col. 20, l. 20.) Stammmler suggests that each individual device may have its own speech dialog system by teaching that "[i]t is furthermore possible that with the aid of one or several interfaces: . . . the individual devices to be selected do not respectively comprise their

own speech dialog system, but are serviced by a single (joint) speech dialog system." (Stammler col. 20, ll. 35-36, 54-56.)

Thus, we agree with the Examiner that the combined teachings of Finn and Stammler fully meet the claimed limitation of "driving each echo canceling facility to combine each facility's functional ability for canceling one or more mutually unique cancelable speech entities, and combining such cancelled entities for overall non-recognition by the system."

Appellant does not argue that the Examiner erred in finding that Stammler teaches a speech recognizing facility used with an echo canceling facility. However, Appellant argues that the Examiner has not provided a proper motivation to combine the teachings of Finn and Stammler and has relied upon improper hindsight reasoning. (Br. 7-8.) We do not agree.

Instead, the Examiner articulated a reason with rational underpinnings for combining the teachings of Finn and Stammler. (Ans. 5-6, 9-10; Final Office Action 5-6.) We agree with the Examiner that the teachings of Stammler that speech recognizers enable convenient, hands-free device control and the teachings of Finn that its echo cancellation system could improve speech recognition performance would provide a reason for one of ordinary skill in the art to have combined the teachings of Finn and Stammler. (Ans. 6, 10; Final Office Action 6; Stammler col. 2, ll. 19-23; Finn col. 3, ll. 17-23.) We find no improper use of hindsight reasoning in the rationale articulated by the Examiner.

Accordingly, we conclude that Appellant has not shown that the Examiner erred in rejecting claim 1 under 35 U.S.C. § 103(a). Dependent claims 5-7 were not argued separately, and fall together with claim 1 from which they depend. Independent claim 8 was argued on the same basis as

independent claim 1 (Br. 6), and we find that Appellant has failed to show error in the rejection of claim 8 for the same reasons discussed with respect to claim 1. Dependent claims 12-14 were not argued separately, and fall together with claim 8 from which they depend.

Regarding claim 15, Appellant argues that the Examiner has failed to cite where the applied art teaches or suggests a "speech input/output means interposed between said speech recognizing and echo canceling facilities, for intercoupling another speech-enhanced device," as claimed. (Br. 7.) We do not agree.

Instead, we find that the Examiner has articulated where Finn and Stammler teach the limitations of claim 15. (Ans. 6-7, 9-10; Final Office Action 5-6.) Moreover, we agree with the Examiner (Ans. 6-7, 9-10; Final Office Action 5-6) that the teachings of Finn and Stammler discussed above with respect to the "combining such cancelled entities for overall non-recognition by the system" limitation of claim 1 also satisfy the "speech input/output means . . . for intercoupling another speech-enhanced device" limitation of claim 15.

Accordingly, we conclude that Appellant has not shown that the Examiner erred in rejecting claim 15 under 35 U.S.C. § 103(a). Claims 16 and 17 were not argued separately, and fall together with independent claim 15 from which they depend.

Regarding the obviousness rejection of claims 2-4 and 9-11, Appellant summarily alleges that "because the independent claims [1 and 8] are patentable, the noted dependent claims [i.e., 2-4 and 9-11] are also patentable at least because of their dependence thereon." (Br. 9.) Because Appellant has not provided any arguments regarding Knittle, nor any

additional arguments for claims 2-4 and 9-11, we will sustain the rejection for the reasons discussed with respect to independent claims 1 and 8, from which claims 2-4 and 9-11 depend.

CONCLUSION OF LAW

We conclude that Appellant has not shown that the Examiner erred in rejecting claims 1-17 for obviousness under 35 U.S.C. § 103.

DECISION

The rejection of claims 1-17 for obviousness under 35 U.S.C. § 103 is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

tdl/gw

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